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YUTSU 2010-47 化工機械設備の開発センター

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US patent application Serial No. 10/500,469

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Shin AIHARA, et al.

For: Antifouling Detergent for Hard Surfaces

Serial No.: 10/500,469

Filed: July 15, 2004 Group: 1751

Examiner: Gregory R. Delcotto

The Commissioner of Patents  
Alexandria Virginia 22313

DECLARATION UNDER 37 CFR 1.132

I, Yosuke KOMATSU, the undersigned, declare that:

I am one of the co-inventors of the invention as described and claimed in the above identified patent application.

I hereby disclose additional test data, test procedures and results of which are below described.

Present Invention Product 2-9 and Comparative Product 2-5

Concentrates were prepared in the same way as shown in Example 2 of the instant application except for components shown in Table 2-1 to obtain Present Invention Product 2-9 and Comparative Product 2-5 and they were tested in Example 2 of the instant application in view of antifouling performance.

Polymer F is explained below Table 2-1.

Test results are shown in Table 2-1. It is noted that Present Invention Product 2-9 using Polymer A of the invention is superior in antifouling performance to Comparative Product 2-5 using Polymer F being outside the invention.

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I hereby declare that all statements made herein of any own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United State Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: September 3, 2007

Yosuke KOMATSU

Yosuke KOMATSU

Table 2-1 hereto attached

Table 2-1

Concentration of flowing liquid (ppm)	Surfactant A	Present invention products						Comparative products						
		2-1	2-2	2-3	2-4	2-5	2-6	2-7	2-8	2-9	2-1	2-2	2-3	2-4
Polymer A	1.0	1.0	1.0	1.0						0.5				
Polymer B					0.2	1.0	5.0	2.0						
Polymer C										0.5				
Polymer D										0.5				
Polymer E										0.5				
Polymer F										0.5				
Surfactant A	1.0										0.5			
Surfactant B		1.0									0.5			
Surfactant C			1.0	0.5	0.5	0.5	1.0				0.5			
Surfactant E			5.0					3.0						
Ethyleneglycol	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Antifouling performance	After 2 months	front region	○	○	○	△	○	○	○	○	○	△	○	△
		water-line region	○	○	○	○	○	○	○	○	○	△	△	△
		water-sealed region	○	○	○	○	○	○	○	○	○	○	○	○

Polymer F : Diallyldimethylammonium chloride/maleic acid /sulfur dioxide (molar ratio 50/50/0) copolymer, a weight-average molecular weight=20,000